Abstract

A valve train comprising cam switching typically for an intermittent control of a four-cycle internal combustion engine comprising following features and components:

- a splined shaft comprising an axial outer gearing and one cam block per cylinder, said cam block comprising an inner gearing through which the cam block can be axially displaced and connected rotationally fast to the splined shaft;

- the cam block comprising per gas exchange valve two cams arranged adjacent to each other and having identical base circle diameters and unequal lifts;

- on each end of the cam block is arranged a cylindrical end piece, and a mirror-symmetric displacing groove is made radially into the periphery of each cylindrical end piece;

- a housing-mounted actuator pin for radial insertion into each displacing groove, the cam block being able to reciprocate axially through the cooperation of the actuator pins and the displacing grooves when the engine is running engine.

A low wear of the valve train and a high switching speed are achieved due to the fact that the displacing grooves possess an accelerating flank comprising an impact ramp whose constant, gentle ascending gradient causes a correspondingly constant, low initial axial speed of the cam block and a feeble impact force of the actuator pins.